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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,656	02/25/2000	Andrew S. Filo	090455-9313	6832

1131 7590 11/17/2004

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EXAMINER

SELLERS, DANIEL R

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 11/17/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/513,656

Applicant(s)

FILO ET AL.

Examiner

Daniel R. Sellers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/02/00, 02/08/02.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings have illegible labels. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7-9 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claims 7-9, the phrase "fob-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "fob-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

4. Claim 13 recites the limitation "the housing" in first line of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim was interpreted as being dependent on claim 12 and not on claim 11.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 26 and 29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Music is not patentable subject matter.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 31-36 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ozawa et al. (Ozawa), U.S. Patent No. 5,870,710.

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8. Regarding claim 31, see Ozawa

An amusement system to obtain signals representative of sound and to store such signals so that the signals may be used to produce sound, the system comprising:

a source of signals representative of sound; (Col. 5, lines 45-47).

an audio port associated with the source and through which signals representative of sound may be sent; and (Fig. 2, unit 23).

a toy configured to receive and store signals representative of sound and to produce sound from such signals; (Col. 5, lines 18-27).

where the toy is configured to connect with the audio port, and to receive and store signals representative of sound transmitted from the source through the audio port to the toy. (Fig. 1, units 1, 4, 7, and 9).

Ozawa teaches an amusement system. It is inherent that the amusement system is a toy.

9. Regarding claim 32, see Ozawa

A method of obtaining signals representative of sound and storing such signals so that the signals may be used to produce sound the method comprising:

providing a source of signals representative of sound where the source includes an audio output port configured to transmit signals representative of sound to a speaker; (Col. 2, lines 55-65 and Fig. 5, units 15 and 17).

providing a device configured to receive and store signals representative of sound; (Col. 2, lines 57-58).

connecting the device to the audio port transmitting signals representative of sound from the source through the audio port to the device; and (Col. 5, lines 18-23 and Fig. 2, units 4 and 23)

storing the signals representative of sound with the device so that the signals may be used to produce sound. (Fig. 7, unit 45).

Ozawa teaches a portable recording and reproducing device.

10. Regarding claim 33, the further limitation of claim 32, see Ozawa

... where the source is a computer. (Col. 5, lines 3-9).

Ozawa teaches that the source is a network service station, where the station comprises computers.

11. Regarding claim 34, the further limitation of claim 32, see Ozawa

... where the audio port is an amplifier output configured to output signals sufficient to drive a speaker.

(Col. 6, lines 38-40).

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Ozawa teaches a portable device that can drive a speaker.

12. Regarding claim 35, the further limitation of claim 32, Ozawa teaches an amusement device that provides the method of claim 32. It is inherent that an amusement device is a toy.

13. Regarding claim 36, the further limitation of claim 32, see Ozawa

... where the signals representative of sound include machine information to control functions of the device. (Col. 6, lines 21-29).

Ozawa teaches that the portable audio device stores and reproduces compressed digital audio. It is inherent that the compressed audio data includes machine information pertaining to the decompression that results before reproduction through a speaker.

14. Claim 37 is rejected under 35 U.S.C. 102(e) as being anticipated by Ono et al. (Ono), U.S. Patent No. 5,991,727.

*An amusement cartridge comprising:
a memory chip configured to store data representative of sound and programming to produce electrical signals representative of sound from the data representative of sound; (Col. 3, lines 53-54).
a housing for the memory chip; and
text or images on the housing related to the data stored by the memory chip.*

Ono teaches an amusement cartridge. It is inherent that the cartridge has a housing, and it is well known in the art that text or images are on the housing, which are related to the data on the memory chip. In an analogous art, prerecorded audio, which has been available in various formats, has included artwork to identify the artist and the recorded music. In another analogous art, video game cartridges, available for sale for decades, have included attached labels, pertaining to the recorded information on the memory chip.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1-4, 11, 12, 16, 17, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono and Layson et al. (Layson), U.S. Patent 6,405,213.

17. Regarding claim 1, see Ono,

An amusement system comprising:

a cartridge configured to store data representative of sound and to produce electrical signals representative of sound where the cartridge includes memory, a processing system, programming executable by the processing system to produce electrical signals representative of sound from the data representative of sound and at least one connector configured to releasably connect the cartridge to a player; and

a player to receive electrical signals representative of sound from the cartridge and to produce sound vibrations from the received signals, where the player is configured to receive the cartridge and to releasably connect to the at least one connector of the cartridge, where the player further includes a transducer to produce the sound vibrations, and where the player includes controls configured to trigger the cartridge to produce electrical signals representative of sound and to transmit those signals to the transducer to produce sound vibrations, but where the player is devoid of a processor to process the electrical signals received from the cartridge. (Col. 2, lines 31-41, and Fig. 1-4).

Ono teaches a method of delivering speech signals to a portable player in a cartridge.

The system comprising of the cartridge and the player provide all the functionality of the claimed subject matter above. Ono does not teach a cartridge which has a processor, nor does he teach a player that is devoid of a processor, however comparing the prior art of figure 4 with the two different embodiments of figures 2 and 3, Ono displays features which are interchangeable between the player and the cartridge. Layson teaches a body-worn tracking device, which implements a field programmable gate

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array (FPGA) device. He does not teach a player and cartridge combination as taught by Ono, however Layson does teach that the use of an FPGA reduces the power requirements of a portable device (Col. 2, lines 36-39). He further teaches that the FPGA can be designed to have microprocessors, memory areas for data and programming, serial I/O and digital I/O all on one device (Col. 2, lines 19-21). One skilled in the art could also recognize that FPGA's can reduce cost by reducing size by removing the need for a plurality of interconnects between several devices. It would have been obvious for one of ordinary skill in the art to combine the teachings of Ono and Layson for the purpose of reducing the size, cost, and power requirements. The combination of Ono and Layson would migrate the player's processing power of Ono's teachings to the removable memory device. Therefore the combination would require the cartridge to include not only the data memory space, but it would include the microprocessor, the program memory space, and the I/O sections.

18. Regarding claim 2, the further limitation of claim 1, see Ono,

... where the cartridge is devoid of a transducer to produce sound vibrations from the signals representative of sound. (Fig. 4)

Ono shows that prior art taught a configuration where the transducer is attached to the player through an output jack.

19. Regarding claim 3, the further limitation of claim 1, see Ono,

... where the player includes a power supply configured to supply power to the cartridge when the cartridge is received by the player. (Col. 3, lines 5-11 and Fig. 2).

Ono teaches that the cartridge needs a power supply connection to the player.

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20. Regarding claim 4, the further limitation of claim 1, see the above rejection of claim 1. The combination of Ono and Layson teach the system-on-a-chip design.

21. Regarding claim 11, the further limitation of claim 1, see Ono

... further comprising at least one other cartridge, and where the player is configured to receive any one of the cartridges. (Col. 1, lines 19-24)

Ono teaches a removable memory card. It is inherent that multiple memory cartridges would be available, and at any given time one would be selected for use.

22. Regarding claim 12, the further limitation of claim 1,

... where the cartridge includes a housing.

It is inherent in the teachings of Ono that the cartridge includes a housing in order to protect the electronics inside.

23. Regarding claim 16, the further limitation of claim 1, see Ono

... where the transducer is at least one earphone. (Fig. 1)

Ono teaches a earphone attached to the cartridge, and further teaches a detachable interface for the earphone (Col. 3, lines 50-52).

24. Regarding claim 17, the further limitation of claim 1, see Ono

... where the transducer is a speaker.

Ono teaches an earphone as an output device as shown above in the rejection of claim 16. The earphone consists of a speaker.

25. Regarding the independent claim 30, see the above rejection of claims 1 and 2.

The combination of Ono and Layson teach these features.

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26. Claims 5, 6, 14, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ono and Layson as applied to claim 1 above, and further in view of Jigour et al. (Jigour), U.S. Patent No. 5,815,426.

27. Regarding claim 5, the further limitation of claim 1, see Jigour

... where the cartridge is configured so that it has at least one side-to-side dimension, and where the largest side-to-side dimension of the cartridge is no more than 2 inches. (Col. 3, lines 33-49).

Jigour teaches an adapter for interfacing a removable memory with a host. He teaches a plurality of removable memory sizes, and there is a long-felt need in the art to continue to reduce the size of electronic devices. Ono and Layson teach all the features of claim 1, as stated above, however they do not teach specific dimensions for their cartridge. It would have been obvious for one of ordinary skill in the art to combine the teachings of Jigour and the combination of Ono and Layson for the purpose of reducing the size requirements of the cartridge.

28. Regarding claim 6, the further limitation of claim 1, see the above rejection of claim 5

...where the player is configured so that it has at least one side-to-side dimension and where the largest side-to-side dimension of the player is no more than 3 inches.

Jigour does not teach the size of the host device, however it is inherent that the device should be as small as possible.

29. Regarding claim 14, the further limitation of claim 12, see the above rejection of claim 5. Jigour teaches a housing with a dimension of less than 25.4 mm (1 inch).

30. Regarding the independent claim 27,

*An amusement cartridge comprising:
a printed circuit board;*

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*a processing system associated with the printed circuit board to produce electrical signals representative of sound from the data representative of sound;
memory associated with the printed circuit board configured to store both data representative of sound and programming executable by the processing system to produce the electrical signals representative of sound from the data representative of sound;
at least one connector configured to allow the cartridge to releasably connect to a player adapted to receive electrical signals representative of sound from the cartridge and to produce sound vibrations from the received signals; and
a housing for the printed circuit board, processing system and memory, where the housing has at least one side-to-side dimension and where the largest side-to-side dimension of the housing is no more than 1 inch.*

The teachings of Ono and Layson describe a processing system to produce electrical signals representative of sound, a memory associated with the system's executable program and sound data, and a connector to releasably connect the player to the cartridge. The combination of Ono and Layson do not mention the use of printed circuit board (PCB), nor do they mention any dimensions. As discussed above, the teachings of Jigour provide a plausible size requirement of analogous art, but Jigour does not teach the player and cartridge combination. Jigour also does not teach the use of PCBs. It is inherent that both these systems employ PCBs in order to provide data paths for the separate components to communicate. It is commonplace for PCBs to be used in consumer electronics, where point-to-point wiring becomes inhibited by cost and size, among a plurality of other reasons. It would have been obvious for one of ordinary skill in the art to combine the teachings of Jigour with the combination of Ono and Layson for the purpose of reducing cost.

31. Regarding claim 28, the further limitation of claim 27, see the above rejection of claim 1. Layson teaches an FPGA, which can place the processing system and memory on one chip. A PCB would still be used to facilitate the input/output functions required of the cartridge and the player.

32. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ono and Layson as applied to claim 1 above, and further in view of Okiebisu, U.S. Patent No. 6,707,924.

33. Regarding claim 7, the further limitation of claim 1, see Okiebisu

7. The amusement system of claim 1 where the player includes a fob-like structure. (Col. 1, lines 53-55).

Okiebisu teaches a necklace configuration for holding a portable electronic device. The necklace has a fob-like structure (Fig. 5). Okiebisu does not teach an amusement device with the features of claim 1. The combination of Ono and Layson teach the features of claim 1, however they do not teach the fob-like structure. It would have been obvious for one of ordinary skill in the art to combine the teachings of Okiebisu and the combination of Ono and Layson for the purpose of hands-free operation and convenience.

34. Regarding claim 8, the further limitation of claim 7, see the above rejection of claim 7. Okiebisu teaches a loop in the fob-like structure.

35. Regarding claim 9, the further limitation of claim 1, see the above rejection of claim 7. See Okiebisu, it would be obvious to allow not only a fob-like structure for the player, but also to provide a fob-like structure for the cartridge (Col. 1, lines 56-58).

36. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ono and Layson as applied to claim 1 above, and further in view of Maskovich, U.S. Patent No. 5,410,762.

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37. Regarding claim 10, the further limitation of claim 1, see Maskovich

... where the cartridge includes a structure configured to attach the cartridge to clothing and clothing accessories. (Col. 2, lines 10-17, Fig. 1, and Fig. 4, unit 42).

Maskovich teaches a belt for securing a portable electronic device to an active wearer.

Maskovich also teaches a clip for securing a portable electronic device. Maskovich does not teach an amusement system with the features of claim 1. The combination of Ono and Layson teach an amusement system with the features of claim 1, however they do not teach a structure to attach the cartridge to clothing. It would have been obvious for one of ordinary skill in the art to combine the teachings of Maskovich with the combination of Ono and Layson for the purpose of securing a device to clothing for an active person.

38. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Ono and Layson combination as applied to claim 11 above, and further in view of Kociemba, U.S. Patent No. 5,908,344.

39. Regarding claim 13, the further limitation of claim 11, see

... further comprising art on the housing relating to the data stored by the cartridge. (Col. 1, lines 44-46).

Kociemba teaches a sound producing protective article. He teaches that the article and the sounds produced are related. The item by itself is considered the housing.

Kociemba does not teach the player and cartridge combination, which is taught by the combination of Ono and Layson. However, they do not teach artwork on housings. It would have been obvious for one of ordinary skill in the art to combine the teachings of

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Kociemba and the combination of Ono and Layson for the purpose of creating a more inclusive entertainment product.

40. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Ono and Layson combination as applied to claim 1 above, and further in view of Ozawa.

41. Regarding claim 15, the further limitation of claim 1, see Ozawa

... where the data representative of sound is data representative of music. (Col. 2, lines 40-47).

Ozawa teaches a portable recording and reproducing apparatus. Ozawa does not teach the specific cartridge and player configuration, however Ozawa does teach the prior art of analog cassette tapes, compact discs, and digital audiotapes. The combination of Ono and Layson teach the features of claim 1, however Ono teaches that the sound is representative of speech (Col. 2, lines 28-29). It would have been obvious for one of ordinary skill in the art to combine the teachings of Ozawa and the combination of Ono and Layson in order to have made the music reproducing apparatus easy to use.

42. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Ono and Layson combination as applied to claim 1 above, and further in view of May, U.S. Patent No. 5,579,284.

43. Regarding claim 18, the further limitation of claim 1, see May

... where the transducer is configured for denta-mandibular sound transmission. (Col. 2, lines 42-48).

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May teaches a self-contained underwater breathing apparatus (SCUBA) diving mouthpiece, which conducts sound through the teeth of a diver. May does not teach a transducer, as such, in an amusement system. The combination of Ono and Layson teaches the features of claim 1 in an amusement system, however they do not teach the use of a transducer, which conducts through the teeth or mandible to the inner ear. It would have been obvious for one of ordinary skill in the art to combine the teachings of May with the combination of Ono and Layson for the purpose of reproducing sound without disturbing persons in close proximity to the device.

44. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Ono and Layson combination as applied to claims 1 and 11 above, and further in view of Lebensfeld et al. (Lebensfeld), U.S. Patent 5,607,336.

45. Regarding claim 19, the further limitation of claim 1, see Lebensfeld

... further comprising a figurine associated with the player. (Col. 1, lines 16-21)

Lebensfeld teaches that figurines that reproduce sound by attachments and by built-in means. Lebensfeld does not teach the cartridge and player configuration of claim 1.

The combination of Ono and Layson teach the features of claim 1, but they do not teach that the player is associated with a figurine. It would have been obvious for one of ordinary skill in the art to combine the teachings of Lebensfeld and the combination of Ono and Layson for the purpose of creating a talking figurine that is easy to use.

46. Regarding claim 20, the further limitation of claim 1, see the above rejection of claim 19.

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47. Regarding claim 21, the further limitation of claim 1, see the above rejection of claim 19. The figurine is described as a toy.

48. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ono and Layson as applied to claim 1 above, and further in view of Scott, U.S. Patent No. 5,365,686.

49. Regarding claim 22, the further limitation of claim 1, see Scott

... where the cartridge is configured to store data representative of images and to produce electrical signals representative of images, and where the player includes an output adapted to display images from the signals representative of images received from the cartridge. (Col. 4, lines 15-18).

Scott teaches a recording and reproducing apparatus comprising a display. He does not teach the player and cartridge combination as taught by the combination of Ono and Layson. Scott teaches a display for displaying photographs or some other display. One skilled in the art can recognize the phrase "some other display" to include an electronic display device. The combination of Ono and Layson does not teach the display. It would have been obvious for one of ordinary skill in the art to combine the teachings of Scott and the Ono and Layson combination for the purpose of creating a multimedia performance.

50. Regarding claim 23, the further limitation of claim 1, see Scott

... where the system is configured to download signals representative of sound and to store the signals in the memory of the cartridge. (Col. 2, lines 33-38).

Scott teaches a system which downloads and stores signals to a memory.

51. Regarding claims 24 and 25, the further limitations of claim 1, see Scott. Scott teaches a system that records signals representative of sound. Scott does not provide

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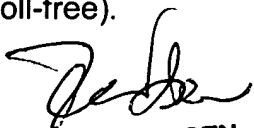
an explanation of the means used to record or download the signal, however one skilled in the art can recognize that previous art has included an input jack for an external microphone.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 703-605-4300. The examiner can normally be reached on Monday to Friday between 9am and 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER

DRS